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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/043,733 | 01/10/2002 | Joseph Mazzeochette | 14123-3 | 6575 |
| 7590 11/18/2003 | | | | |
| GLEN E. BOOKS, ESQ. LOWENSTEIN SANDLER PC 65 LIVINGSTON AVENUE ROSELAND, NJ 07068 | | | | |
| EXAMINER EASTHOM, KARL D | | | | |
| ART UNIT 2832 | | PAPER NUMBER | | |

DATE MAILED: 11/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

LM

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/043,733 | MAZZOCHETTE, JOSEPH | |
| | Examiner | Art Unit | |
| | Karl D Easthom | 2832 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-8, 10-22 and 24-28 are rejected under 35 U.S.C. 102(e) as being anticipated by Kawase '723. Kawase discloses the invention at Figs 1 and 8A with insulating layers embedding the thermistor sheets 1 (green sheets) (col. 3, lines 48-58), fired at col. 5, lines 1-35 at 1000C, and metalization 5a, 5b. The device can attenuate at all frequencies and is LTCC – claims 2, 13, 27, and 28. (See cols. 1-2 of Haq 6,284,080 for the definition of LTCC, and col. 5, lines 1-3 discloses that “low temperature” means about 600- 1000 degrees C and employs “green sheets”). For claims 3, 6, 14, 20 and 27-28, PTC and NTC resistors can be used together and connected in series or parallel at col. 6, lines 45-60. Further, some of the resistors such as 3 are not perfectly zero TCR, so that they are thermistors since they have a finite TCR. For claim 1, the electrodes can be trimmed by scraping same. For claims 11-12 15-16 and 25-25, no circuit is claimed, only one of intended use is noted in the preamble of claim 13, and the former claims

15-16 merely describe what circuit the device is intended to be used in, and thus that is not deemed claimed. In claims 17 and 20, the sheets are in parallel. In claims 4, 7-8, 18-19 and 21-22, the lateral area of the sheets is larger than at the ends. In claims 10 and 24, the electrodes are patterns. For the remaining claims, the like elements of the other claims not mentioned are as noted for the like elements of the other claims.

4. Claims 1, 3-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Greuter et al. Greuter discloses the claimed invention at Figs. 8 or 9-10 where resistors 41, 4 are thermistors embedded in the substrates 51, 5 with metallization 1. The body 5 may be ceramic, as noted at col. 5, lines 39-49 and col. 7, lines 45-50, meeting claim 2. In claim 3, the bodies 4 at Fig. 8 are in parallel. In claim 4, the circumferential area of 4 or 41 is larger than the area at its ends, by definition, since it is a cylinder. For claim 8, Fig. 8 meets the claim where 41 is longer across the figure than it is thick. The electrodes are trimmable since one can scrape them and thereby limit the amount of thermistor under same.

5. Claims 1, 3-8, and 10-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Abe et al. Abe discloses the claimed invention at Fig. 2 where resistors 2a-3a are parallel connected thermistors embedded in the substrate 5 with metallization 8 on major surfaces thereof, meeting claim 6. For claims 3-5 and 8, the major surfaces are the top and bottoms of the device as seen at Fig. 2. For claim 7, the ends where terminals 8 are primarily located are the major surfaces. In claim 2, the glass substrate is lead boro-silicate, where silicate is deemed to meet the element of ceramic. In claim 10, the electrodes have a pattern. In claim 11, no circuit is claimed, it is intended use, so that what it is called is not a claimed element.

6. Claims 1, 3-5, 7-8, 10, 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Yoneda (JP 1-66906). The invention is disclosed at the abstract with embedded resistors 21, 22, and electrodes 26 connecting same in groups. The electrodes are trimmable and are on major surfaces. All other claims follow from that since the thermistors extend between the major surfaces. In claim 12, no circuit is claimed since it is in the preamble as an intended use. The device could compensate and does attenuate, since it is a resistor/thermistor.

7. Claims 2, 13, 15-22 and 24-28 are rejected under 35 U.S.C. 103 as being anticipated by Yoneda (JP 1-66906) in view of Haq. The invention is disclosed as noted above except the LTCC. Haq discloses at cols. 1-2 that there are only two ways to make devices such as that of Yoneda, LTCC or HTCC, so that it would have been obvious to form them using LTCC where it is disclosed as inexpensive at col. 2. The thermistors have different temperature coefficients as noted.

8. Claims 2, 27 and 28 are rejected under 35 U.S.C. 102(b) as anticipated by Abe et al., or Kawase '723 (as noted above), or, in the alternative, under 35 U.S.C. 103(a) as obvious over either in view of Haq. The invention is disclosed as noted above as regards the 102 alternative as to the respective claims noted thereat. Or in the 103 alternative, assuming the LTCC is not met, Haq discloses at cols. 1-2 that there are only two ways to make devices such as that of Abe or Kawase, either LTCC or HTCC, so that it would have been obvious to form them using LTCC where it is disclosed as inexpensive at col. 2.

9. Claims 13-22 and 23-28 are rejected under 35 U.S.C. 102(b) as anticipated by Kawase '723 (as noted above), or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kawase '723. The invention is as noted above, but here, in the alternative, where arguing the multiple

different thermistor sheets of PTC and NTC are not explicitly disclosed as used together, it would have been obvious given the disclosure and suggestion of employing different circuit devices in the same chip, or to used different NTC or PTC temperature characteristics where linear resistors that have different temperature characteristics are used. It would have been also obvious to employ same in any circuit where the device is used to compensate circuits.

10. Claims 9 and 23 are rejected under 35 U.S.C. 103(a) as obvious over Kawase '723 (or Kawase with Haq as noted) in view of Mazzochette et al. and known admitted prior art. The claimed invention is disclosed as noted above except for the material of the circuit. That circuit is known from the noted secondary art as admitted by applicant at page 4, while Kawase discloses at bottom of col. 6, that any parallel and series combination can be made into the desired circuit, so that it would been obvious to employ such a well known circuit to compensate as desired given the circuits generally disclosed by Kawase

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl Easthom whose telephone number is (703)308-3306. The examiner can normally be reached on M-Th. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad, can be reached on (703)308-7619. The fax phone number for the organization where this application or proceeding is assigned is (703)308-7722. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.


KARL D. EASTHOM
PRIMARY EXAMINER